

REMARKS

I. Status of the Claims

Claims 39, 43, 49-51 and 75-78 were pending and examined in the November 2, 2010 Office Action. With this Reply, claims 39, 49 and 50 are amended and claims 51 and 75-78 are newly cancelled. The claim amendments are made without prejudice or disclaimer and introduce no new matter. Support for the claim amendments is found at least at paragraphs [0050], [0053], [0054] and [0060] of the specification as published as US 2003/0150000.

Claims 39, 43, 49 and 50 are presented for reconsideration.

II. Rejections under 35 U.S.C. § 112, First Paragraph

(a) Written Description

Claims 39, 43, and 75-78 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Applicants request reconsideration and withdrawal of this rejection in light of the claim amendments and the following discussion.

The Office Action asserts at p. 4 that "[t]he specification does not provide a written description of a *Tupaia belangeri* infected with HIV and having a disease phenotype marked by the presence of a viral RNA, protein, or serum antibody that reacts to a component of HIV, or any other disease phenotype, such that the infected animal would model the human infection and disease sequelae." In response, Applicants note that the claims as amended are not directed to HIV-infected *Tupaia belangeri*. As such, any aspect of the written description rejection relating to HIV is moot.

On p. 6, the Office Action asserts, "[t]he as-filed specification does not describe a method for evaluating a therapeutic procedure with the steps set forth in the present claims. Even as relates to the disclosed *Tupaia belangeri* models, no *in vivo* screening methods are disclosed as such." In response, Applicants note that Example 2, at

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paragraphs [0063] to [0074] of the specification as published as US 2003/0150000, does describe *in vivo* methods of evaluating a therapeutic procedure (oral tolerization) according to the claimed methods. Those methods are further supported by Example 1, at paragraphs [0031] to [0062], which details disease and clinical manifestations of HBV infection of *Tupaia belangeri*. As such, Applicants assert that the claimed methods are fully supported in the specification. Withdrawal of the written description rejection under 35 U.S.C. 112, first paragraph is therefore respectfully requested.

(b) Enablement

Claims 39, 43 and 75-78 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. Applicants request reconsideration and withdrawal of this rejection in light of the claim amendments and the following discussion.

The Action asserts at pp. 8-9 that "...the specification, while being enabling for therapeutic screening methods that use *Tupaia belangeri* infected with HBV in a method for developing a therapeutic procedure, does not reasonably provide enablement for therapeutic screening methods that use HIV-infected *Tupaia belangeri*." In response, Applicants note that the claims as amended are not directed to therapeutic screening methods using HIV-infected *Tupaia belangeri*. Indeed, the claims as amended are directed to therapeutic screening methods that use *Tupaia belangeri* infected with HBV in a method for developing a therapeutic procedure, precisely what is claimed. As such, Applicants assert that the claimed methods are fully enabled. Withdrawal of the enablement rejection under 35 U.S.C. 112, first paragraph is therefore respectfully requested.

III. Rejections under 35 U.S.C. § 103

(a) Claims 39, 49, 51 and 75-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walter et al. (1996, Hepatology 24:1-5). The Office Action asserts at

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p. 14 that Walter et al. "disclose that *Tupaia belangeri* are susceptible to infection with hepatitis B virus (HBV). The reference notes that *Tupaia*s are useful for the experimental analysis of various molecular and clinical aspects of HBV infection, as well as the evaluation of various antiviral strategies" Applicants request reconsideration and withdrawal of this rejection in light of the following comments.

The independent claims as amended are

39. A method for developing a therapeutic procedure in a model animal system comprising the steps of:

- a) infecting a *Tupaia belangeri* with HBV;
- b) carrying out a potential therapeutic procedure in said infected *Tupaia belangeri*; and
- c) evaluating the effect of said potential therapeutic procedure on a disease manifestation caused by said human viral pathogen in said infected animal, wherein said disease manifestation is hepatic histological evidence of fibrosis, bile duct proliferation, lymphocytes, ground glass hepatocytes or a combination thereof.

and

49. A method for developing a therapeutic procedure which alleviates a clinical manifestation of a disease caused by HBV, the method comprising the steps of:

- a) infecting a *Tupaia belangeri* with HBV;
- b) carrying out a potential therapeutic procedure in said infected *Tupaia belangeri*, wherein said potential therapeutic procedure is oral tolerization; and
- c) evaluating the effect of said therapeutic procedure on the clinical manifestation caused by said human viral pathogen.

With respect to claim 39, Walter et al. do not teach or suggest that HBV-infected *Tupaia belangeri* manifest hepatic histological evidence of fibrosis, bile duct proliferation, lymphocytes, or ground glass hepatocytes. With respect to claim 49, Walter et al. do not teach or suggest oral tolerization as a potential therapeutic procedure. As such, Walter et al. do not teach or suggest each element of the claims as amended. Since Walter et al. do not teach or suggest every element of the instant claims, that reference does not make the instant claims obvious. Withdrawal of this rejection under 35 U.S.C. 103(a) is therefore respectfully requested.

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(b) Claims 39, 49, 51 and 75-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yan et al. (1996, J. Cancer Res. Clin. Oncol. 122:283-288). The Office Action asserts that Yan et al. "disclose that *Tupaia belangeri* can be infected with human hepatitis B virus (HBV) by inoculation with human serum positive for HBV (abstract). Infection can be prevented by immunization with hepatitis B vaccine. Immunization is a therapeutic procedure and therefore it is evident that the authors recognized the animal model as being useful for testing therapies." Applicants request reconsideration and withdrawal of this rejection in light of the following comments.

With respect to claim 39, Yan et al. do not teach or suggest that HBV-infected *Tupaia belangeri* manifest hepatic histological evidence of fibrosis, bile duct proliferation, lymphocytes, or ground glass hepatocytes. With respect to claim 49, Yan et al. do not teach or suggest oral tolerization as a potential therapeutic procedure. As such, Yan et al. do not teach or suggest each element of the claims as amended. Since Yan et al. do not teach or suggest every element of the instant claims, that reference does not make the instant claims obvious. Withdrawal of this rejection under 35 U.S.C. 103(a) is therefore respectfully requested.

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IV. Conclusion

In view of the foregoing remarks, Applicants respectfully request withdrawal of all rejections and passage of claims 39, 43, 49 and 50 to allowance.

Applicants authorize the United States Patent and Trademark Office to charge all fees required to maintain pendency of this application, including the extension of time and Request for Continued Examination fees, to Deposit Account No. 05-1135.

If a telephone conversation would further the prosecution of the present application, Applicants' undersigned attorney requests that he be contacted at the number provided below.

Respectfully submitted,



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